

Global Air Traffic Management (GATM)



Capt Gina Hubbard
Feb 2000

OVERVIEW

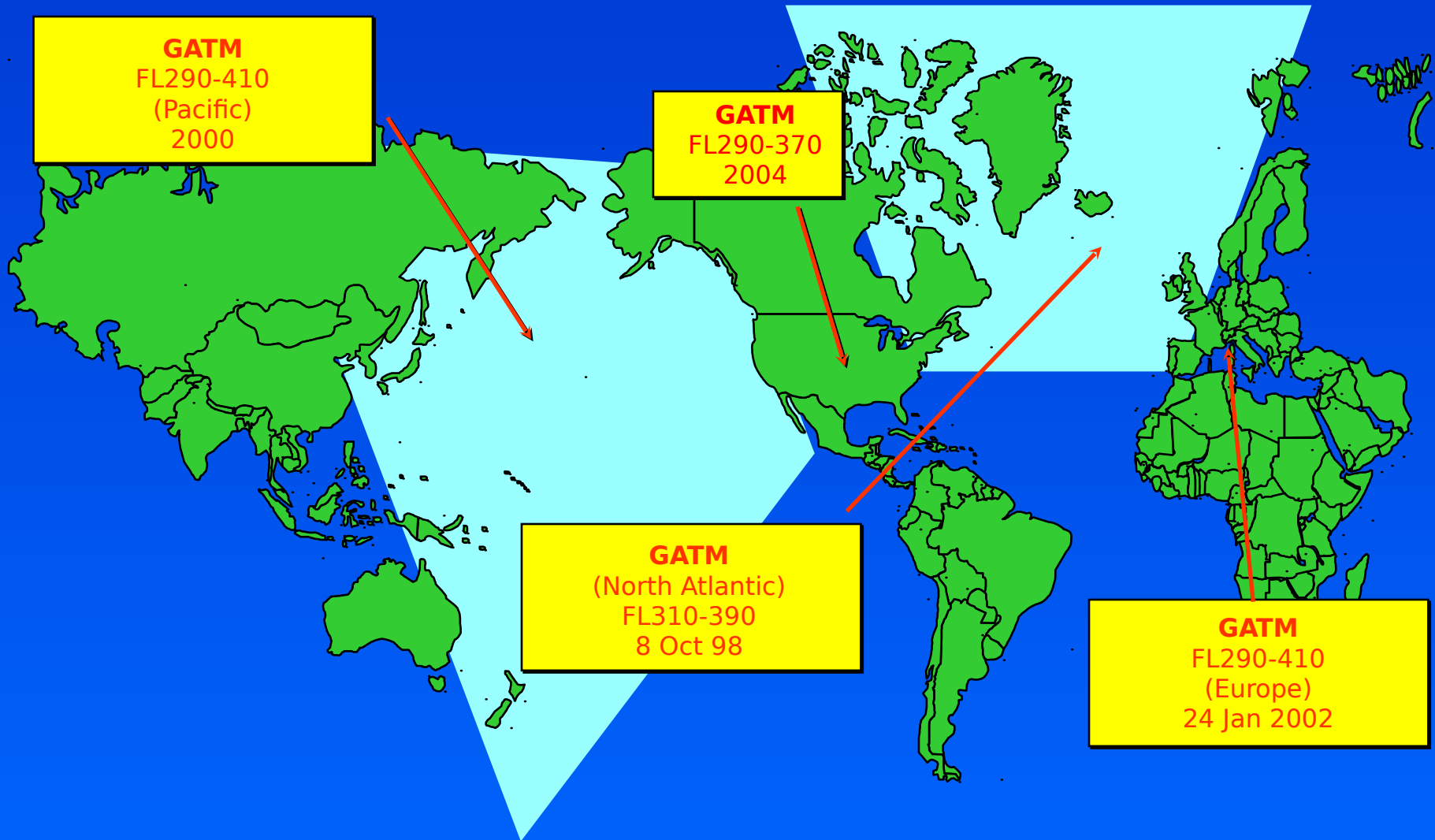
- **GATM Defined**
- **Operational Significance**
- **AFMSS Implementation Plans**

GATM (Air Force CNS/ATM)

Category		Components	Goal
C N S	Communication Digital Radios to Handle Reduced Channel Spacing and Datalink	<ul style="list-style-type: none"> • 8.33 KHz Radios • CPDL 	Air Traffic Management Transition from <u>ATC</u> to <u>ATM</u> With the Ultimate Goal of Free Flight (2010)
	Navigation Better Horizontal/Vertical Position Accuracy to Enable Reduced Separation	<ul style="list-style-type: none"> • RNP • RVSM • FM Immunity 	
	Surveillance Enhanced Situational Awareness, Collision Avoidance, Automatic Position Reporting	<ul style="list-style-type: none"> • ADS-B/A • Mode S • TCAS 	

**GATM=Continued Operation IAW New Separation
Standards/Procedures**

GATM Airspace by 2003-05



2005... “Non-Compliant” Platform Tasked to Deploy ~~to Europe~~

- **Trans-Oceanic Impacts: Cross Below FL 290 (Reduced Vertical Separation Minimum - RVSM)**
- **Possible In-Theater GATM Impacts**
 - Restricted from VOR or ILS Approach (FM Immunity)
 - Airspace Access Restricted (FM Immunity, ACAS/TCAS)
 - Restricted Ops to Below FL 245 (8.33 VHF)
 - Unable to Fly General Air Traffic (Mode S)... Operational Air Traffic may still be allowed

German Announcement

"State aircraft or others without properly protected ILS/VOR receivers...cannot expect to use such equipment for instrument approaches to German aerodromes after 1 January 2001."

GATM Example: Aircraft Separation by 2003

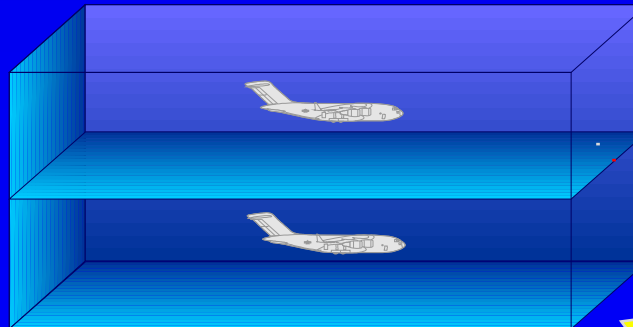
Aircraft Separation Decreases Over Time

- 2000' to 1000' Vertically
- 60 to 30 NM Horizontally

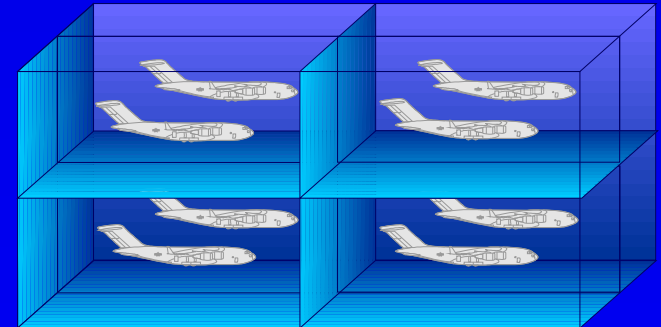
Past



Present



Future



**CNS/ATM
2003**

**RVSM
Mar 1997**

**New
Communication,
Navigation and
Surveillance
Equipment Is
Needed to
Preserve Safety
and Efficiency**

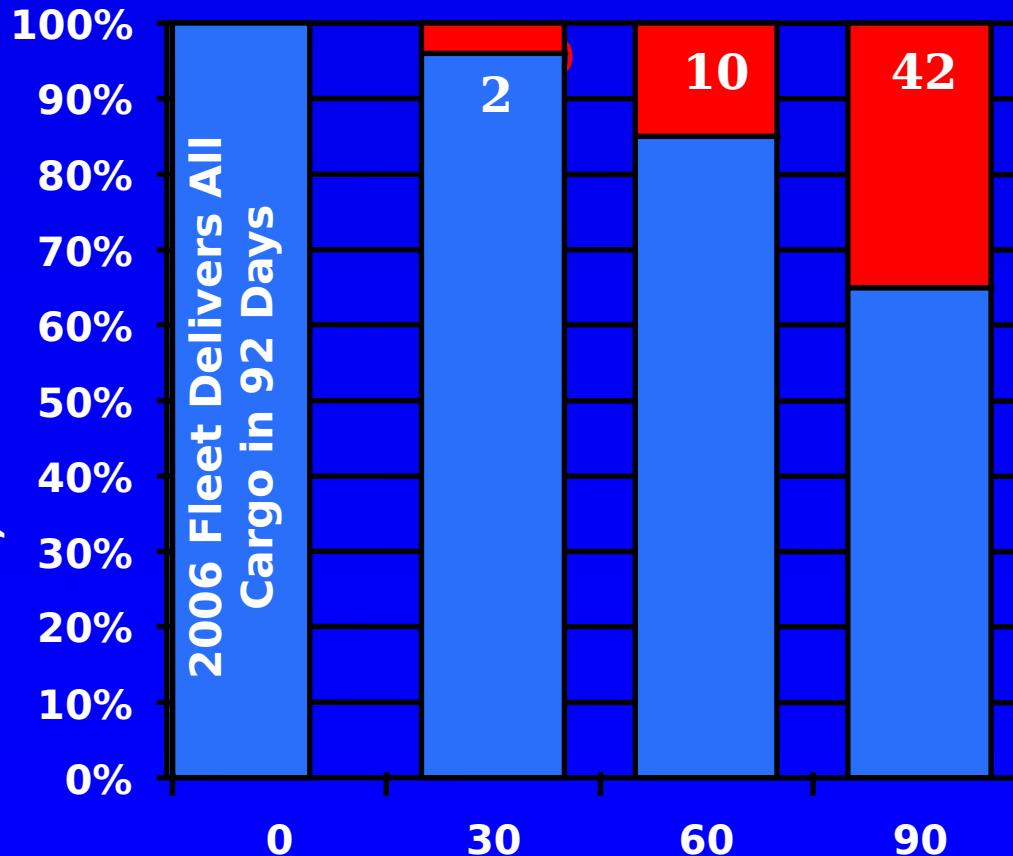
Impact Of Noncompliance

= Extra Days to Deliver
Shortfall

Reply of DESERT SHIELD/STORM With 2006 Airlift Fleet
First 92 Days

Percent of Total Historical Cargo Throughput

465,661 Short Tons



Minutes of Additional Flight Time Due to Noncompliance

Assumes
Compliance
with CRAF

IT'S HAPPENING NOW!

- **Guard Lift KC-135 Mission to Aviano AFB**
 - **Not RVSM compliant**
 - » **Transoceanic flight restricted to FL 290 and below**
 - **Radios not 8.33KHz compliant**
 - » **Parisian Sector Controller would not allow SRS exempt aircraft into their airspace**
- **ALLIED FORCE B-2 Mission to Kosovo**
 - **Not RVSM compliant**
 - » **Transoceanic flight restricted FL 290 and below**
 - » **Weather a SIGNIFICANT factor**

**BOTTOM LINE: Non-compliance = Less Than
Optimum Routing = More Time + More Fuel**

Where Is Mission Planning?

- **TODAY**

- **MPS**

- » Impact not evaluated yet

- **PFPS**

- » Changes being incorporated into AWEs for TASM aircraft (C-17, C-141, C-5, KC-10, KC-135, C-9, E-3, E-8)

- » Other platform's impacts not evaluated yet

- **JMPS**

- » Working to add to Version 1 requirements

- **NEAR TERM**

- AFMSS GATM Tiger Team established Jan 00

- Jul 00 present Operational Impact Analysis (OIA)

- **FAR TERM**

- Permanent AFMSS GATM IPT

GATM POCs

HQ AMC

**Maj Daryl Taylor
6459**

DSN 576-

HQ ACC

**Maj Brian Howell (Aircraft Reqmts) DSN 574-
1077**

**Mr Fred Aronson (Mission Planning) DSN 574-
1868**

**LtC Robert Clardy (Ops Issues) DSN 574-
5896**

ESC/ACU

**Capt Gina Hubbard
1186 x4637**

DSN 478-